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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,710	09/25/2003	Shin-ichi Kanno	04284.0875	6399
22852 7590 06/13/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER TO, BAOTRAN N	
			ART UNIT 2135	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/669,710	Applicant(s) KANNO ET AL.	
	Examiner Bao tran N. To	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 17-24 (Canceled) ~~is/are withdrawn from consideration.~~
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Docketing

1. Please note that the application has been re-docketed to a different examiner. Please refer all future communications regarding this application to the examiner of record using the information supplied in the final section of the Office action.

This Office action is responsive to the Applicant's Amendment filed 03/19/2007.

Claims 1 and 4-8 are amended.

Claims 17-24 are canceled.

Claims 1-16 remain for examination.

Response to Arguments

2. Applicant's arguments filed 03/19/2007 have been fully considered but they are not persuasive.

Applicant argues, "Applicants respectfully traverse the Examiner's claims 1, 4, 9, and 12 under 35 U.S.C. § 103(a) as being unpatentable over Shin in view of Judge, because a prima facie case of obviousness has not been established" (Page 2 of Remarks).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

Art Unit: 2135

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Shin's reference and Judge's reference are analogous arts. They both specifically disclose how to control network traffic to a network computer which provides network computer services that can support the motivation to combine the Shin's teaching with Judge's teaching to establish the limitations of Claims 1 and 9 that provide enhanced security of electronic communications (see Judge col. 5, lines 10-12). Furthermore, It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have incorporated Judge's reference within Shin to include a predetermined time period for the request measurement unit. One of ordinary skill in the art would have been motivated to do this because it provide enhanced security of electronic communications (see Judge col. 5, lines 10-12).

Applicant further argues, "However, Shin's mere mention of load indicators, as to an overload condition, and system capacity does not constitute "a response measurement unit configured to measure a number of responses which have been made from said server computer to said client computers within the predetermined time period," as recited in amended claim 1 (emphasis added). In fact, Shin is silent with respect to response from a server to a client "because one is ultimately interested in controlling the influx of requests." Shin, para. [0094]" (Page 3 of Remarks).

Examiner respectfully disagrees with this argument. Shin explicitly discloses, "The monitor is loaded as an independent kernel-module to sample system statistics. At

this time, the administrator may indicate the importance of different load-indicators for the assessment of server overload. The monitoring module itself assesses server capacity based on its observations of different load indicators. Accounting for both the importance of all load indicators and the system capacity, the monitor computes the server load-index. Other kernel modules may register with the monitor to receive a notification if the load-index falls into a certain range" (Paragraph 0067). Shin further discloses, "The Linux OS collects numerous statistics about the system state, some of which are good indicators of overload conditions. A lightweight monitoring module is implemented that links itself into the periodic timer interrupt run queue and processes a subset of Linux's statistics (Table 1). Snapshots of the system are taken at a default rate of 33 Hz. While taking snapshots, the monitor updates moving averages for all monitored system variables" (Paragraph 0096).

Applicant further argues, "However, Shin's mere mention of overload and underload thresholds does not constitute 'at least one server load calculation unit configured to obtain a load state of said server computer by using measurements of said request measurement unit and said response measurement unit,' as recited in amended claim 1 (emphasis added) (Page 4 of Remarks).

Examiner respectfully disagrees with this argument. Shin expressly discloses at least one server load calculation unit (see Fig. 1, Monitor & Load Controller) configured to obtain a load state (see pg. 6, ¶ [0097 - 0101], load index) of said server computer by using measurements of said first measurement unit and said second measurement unit

(see pg. 5, ¶ [0078], "acceptance rates"). Therefore, the combination of Shin and Judge discloses the limitations of Claim 1.

Applicant further argues, "However, Kubo fails to teach or suggest at least the claim elements listed above. Therefore, none of Shin, Judge, and Kubo, taken alone or in any reasonable combination, teaches or suggests all elements as required by claims 2-6, 8, 10-14, and 16" (Page 5 of Remarks).

Examiner respectfully disagrees with this contention. Claims 2-6, 8, 10-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin in view of Judge as applied to claims 1 and 9 above and further in view of Kubo. With the respect to claims 2 and 10, Shin and Judge do not explicitly teach said server load calculation unit determines the load state from at least the number of data requests which are to be transferred to said server computer within said predetermined time period, relative to the number of data requests which have been accepted by said data request acceptance unit within said predetermined time period. However, Kubo reference discloses it determines the load state (see col. 4, lines 15-18) from at least the number of data requests which are to be transferred to said server computer (see col. 4, lines 62-65, "the number of in process transactions") within said predetermined time period (see col. 4, lines 62-65, certain time cycle), relative to the number of data requests which have been accepted by said data request acceptance unit (see col. 4, lines 62-67, "number of job processing processes staying in the CPU system") within said predetermined time period (see col. 4, lines 62-65, certain time cycle). It would have

Art Unit: 2135

been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have Shin invention include the details that the load state is obtain in the manner of Kubo to provide a low-overhead dynamic load balancing method (see Kubo col. 4, lines 7-9).

For at least the above reasons, it is believed that the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. U.S.P.G. Pub. No. 2002/0138643 in view of Judge et al., U.S. Patent No. 7,124,438.

With the respect to claims 1 and 9, Shin reference discloses: a data request acceptance unit (see Fig. 1, Traffic Shaper) configured to accept data requests (see Fig. 1, Incoming Service Requests) sent from client computers, as proxy for the server computer (see pg. 3, ¶ [0040], "network traffic includes requests for service from network clients over the network"; pg. 4, ¶ [0061 - 0062], "client population");

at least one request measurement unit (see Fig. 1, Traffic Shaper) configured to measure a number of data requests (see pg. 5, ¶ [0089], "arrival rate of packets") which

Art Unit: 2135

have arrived from said client computers (see Fig. 1, Incoming Service Requests; pg. 4, ¶ [0061]);

a response measurement unit (see Fig. 1, monitor) configured to measure a number of responses (see pg. 4, ¶ [0067], "accesses server capacity based on its observations"), which have been made from said server computer to said client computers (see pg. 4, ¶ [0096]);

at least one server load calculation unit (see Fig. 1, Monitor & Load Controller) configured to obtain a load state (see pg. 6, ¶ [0097 - 0101], load index) of said server computer by using measurements of said first measurement unit and said second measurement unit (see pg. 5, ¶ [0078], "acceptance rates"); and

a data request transfer unit (see Fig. 1, Traffic Shaper) configured to change a rate of the number of data requests (see Fig. 1, Traffic Shaping Policy; ¶ [0062], "if one wants to change the request rate ...") based on the load state determined by said server load calculation unit (see Fig. 1, Load Controller; pg. 3, ¶ [0043 - 0047]).

Shin reference doesn't teach the measurement unit collecting measurements within a predetermined time period. Judge reference teaches a measurement unit configured to collect measurements within a predetermined time period (see col. 16, lines 15-16 and lines 52-62). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have incorporated Judge's reference within Shin to include a predetermined time period for the request measurement unit. One of ordinary skill in the art would have been motivated to do this

because it provide enhanced security of electronic communications (see Judge col. 5, lines 10-12).

With the respect to claims 4 and 12, Shin references discloses:

a load state storage unit configured to store said load state of said server computer (see pg. 3, ¶ [0039], "Storage is provided for storing a set of rule data");

wherein said server load calculation unit changes the value stored in said load state storage unit (see pg. 5, ¶ [0081]), in accordance with a new load state of said server computer (see pg. 2, ¶ [0031]); and

wherein, as said changed value stored in said load state storage unit exhibits a higher load (see pg. 4, ¶ [0070], Overload condition; pg. 5, ¶ [0081], system load increases beyond bounds), the rate of said number of the data requests which are to be transferred to said server computer is decreased by said data request transfer unit (see pg. 3, ¶ [0044] - [0045]); and

wherein, as said changed value stored in said load state storage unit exhibits a lower load (see Fig. 5 & 6, Underload Signal; pg. 4, ¶ [0070]), the rate of said number of the data requests which are to be transferred to said server computer is increased by said data request transfer unit (see pg. 3, ¶ [0044] & [0046])

4. Claims 2-6, 8, 10-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. U.S.P.G. Pub. No. 2002/0138643 in view of Judge et al., U.S. Patent No. 7,124,438 in view of Kubo U.S. Patent No. 6,986,139.

With the respect to claims 2 and 10, Shin reference doesn't explicitly teach: said server load calculation unit determines the load state from at least the number of data requests which are to be transferred to said server computer within said predetermined time period, relative to the number of data requests which have been accepted by said data request acceptance unit within said predetermined time period.

Kubo reference discloses it determines the load state (see col. 4, lines 15-18) from at least the number of data requests which are to be transferred to said server computer (see col. 4, lines 62-65, "the number of in process transactions") within said predetermined time period (see col. 4, lines 62-65, certain time cycle), relative to the number of data requests which have been accepted by said data request acceptance unit (see col. 4, lines 62-67, "number of job processing processes staying in the CPU system") within said predetermined time period (see col. 4, lines 62-65, certain time cycle). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have Shin invention include the details that the load state is obtain in the manner of Kubo to provide a low-overhead dynamic load balancing method (see Kubo col. 4, lines 7-9).

With the respect to claims 3 and 11, Shin reference teaches wherein in a case where said data request transfer unit has judged that a load of said server computer increases from said load state of said server computer as obtained by said server load calculation unit (see pg. 2, ¶ [0031], "measuring capacity of the network computer to

service the network traffic"), the rate of said number of the data requests which are to be transferred to said server computer is decreased (see pg. 3, ¶ [0037], throttling); and in a case where said data request transfer unit has judged that the load of said server computer decreases (see pg. 2, ¶ [0031], "measuring capacity of the network computer to service the network traffic"), the rate of said number of the data requests which are to be transferred to said server computer is increased (see pg. 3, ¶ [0038], throttling).

With the respect to claims 5 and 13, Shin and Judge reference discloses: a response amount measurement unit (see Shin Fig. 1, monitor) configured to measure the size of the responses (see Shin pg. 4, ¶ [0067], "accesses server capacity based on its observations") made from said server computer to said client computer (see pg. 4, ¶ [0096]) within said predetermined time period (see Judge col. 16, lines 15-16 and lines 52-62);

wherein said server load calculation unit determines the load state from the size of the responses made from said server computer (see pg. 4, ¶ [0066]-[0067], "accesses server capacity"; pg. 6, ¶ [0097], "load index") and as the measured size of the responses increases, the load is calculated to be higher by said server load calculation unit (see pg. 4, ¶ [0070], "receives an overload or underload notification in terms of the server load-index").

With the respect to claims 6 and 14, Shin reference discloses: a re-response detection unit (see Fig. 1, Monitor) configured to detect that the response from said

Art Unit: 2135

server computer to said client computer has been resent (see pg. 4, ¶ [0067], load indicators);

wherein said server load calculation unit determines the load state from re-response detection (see Fig. 5, Monitoring load Index; ¶ [0097]) and, when said re-response detection unit has detected a resending, the load of said server computer which has resent said response to the data request of said client computer is calculated to have become higher by said server load calculation unit (see pg. 5, ¶ [0096], "the monitor updates moving averages for all monitored system variables").

With the respect to claims 8 and 16, Shin & Judge combination teaches: a connection detection unit configured to detect a new connection from said client computer (see Shin pg. 4, ¶ [0062], "Traffic classes may represent specific ... client populations");

wherein said server load calculation unit determines the load state from the detected new connection (see Shin pg. 7, ¶ [0108], "invention maintains responsiveness to sudden load-shifts") and, when said connection detection unit has not detected a new connection (see Shin Fig. 8; pg. 5, ¶ [0085]) within said predetermined time period (see Judge col. 16, lines 15-16 and lines 52-62), the load of said server computer as corresponds to said client computer is calculated by said server load calculation unit to have become lower (see Shin pg. 6, ¶ [0097]; pg. 7, ¶ [0108], "invention maintains responsiveness to sudden load-shifts and achieves accurate load-control under sustained load").

Art Unit: 2135

5. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. U.S.P.G. Pub. No. 2002/0138643 in view of Judge et al., U.S. Patent No. 7,124,438 and Kubo U.S. Patent No. 6,986,139 as applied to claims 1 and 2 above, and further in view of Silverman U.S. Patent No. 7,107,619.

With the respect to claims 7 and 15, Shin reference doesn't explicitly teach: • a communication state detection unit configured to detect if said client computer has been forcibly cut off and to detect if any abnormality in a communication state exists;

wherein the said server load calculation unit determines the load state from detected state and, when said communication state detection unit has detected a forced cut off or an abnormal communication, the load of said server computer as corresponds to said client computer is calculated to have become higher by said server load calculation unit.

Silverman reference teaches: a communication state detection unit configured to detect if said client computer has been forcibly cut off and to detect if any abnormality in a communication state exists (see col. 12, lines 22-29, "number of incorrect responses"); It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to have Shin invention configured to detect abnormality in a communication state for measuring and monitoring of network performance and throughput, including detection of abnormal

Art Unit: 2135

conditions indicating presence of computer hacker denial of service attacks and reaction to such attacks (see Silverman col. 1, lines 24-32).

This combination would result wherein the said server load calculation unit determines the load state from detected state (see Shin pg. 4, ¶ [0066] - [0067], "The monitoring module itself assesses server capacity based on its observations of different load indicators.") and, when said communication state detection unit has detected a forced cut off or an abnormal communication (see Silverman col. 12, lines 22-29. "number of incorrect responses"), the load of said server computer as corresponds to said client computer is calculated to have become higher by said server load calculation unit (see Shin pg. 2, ¶ [0031], "measuring capacity of the network computer ... throttling the network traffic to the network computer").

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

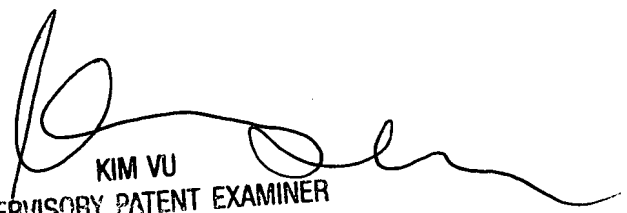
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baotran N. To whose telephone number is 571-272-8156. The examiner can normally be reached on Monday-Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BT
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